SOKOLOV, N.G., kand.tekhn.nauk; SHEKHVITS, E.I., kand.tekhn.nauk

Modernization of the vertical milling machine. Mashinostroitel'
no.1:13-14 Ja '61.   (MIRA 14:3)
      (Milling machines--Technological innovations)

MINSKER, Emmanuil Isaakovich; SOKOLOV, Nikolay Georgiyevich;
        KAMINSKIY, Ye.A., red.; BORUNOV, N.I., tekhn. red.

        [Electric wiring of metal-cutting machine tools]Elektriche-
        skie provodki metallorezhushchikh stankov. Moskva, Gosenergo-
        izdat, 1962. 63 p. (Biblioteka elektromontera, no.70)
                                                (MIRA 16:1)
        (Machines—Electric driving)

SANDLER, A.S.; SOKOLOV, N.G.

[Collection of automatic control systems for electric drives
of machine tools] Sbornik skhem avtomaticheskogo upravle-
niia elektroprivodami metallorezhushchikh stankov. Izd.2.,
perer. i dop. Moskva, Mosk. energ. in-t, 1963. 31 p.
(MIRA 16:10)
(Machine tools--Electric driving)
(Automatic control)

SOKOLOV, Nikolay Georgiyevich; KORENEVSKIY, A.N., retsenzent;
    LIGERMAN, I.I., red.

[Principles of the design of electric drives] Osnovy
konstruirovaniia elektroprivodov. Moskva, Energiia, 1965.
287 p.   (MIRA 18:5)

SOKOLOV, N.I.   DECEASED   1962/

Geology   C' 1961   4

records center
SEE ILC.

GEOLOGY

EROFEEV, M. T.

"Concerning the Revision and in Defense of Professor Dedyulin's Method". Vestn. sovrem. veterin., 1929, No. 2.

SOKOLOV, N. I. (Lecturer), MIRONOV, I. A.(Professor),   and VAYNTRAUB, A. M.

"The etiology of infertility in cattle in Leningrad oblast and some bases for its therapy and prophylaxis", (Assistant, Department of Obstetrics and Gynecology). Collected Works No. 14, of Leningrad Veterinary Institute USSR Ministry of Agriculture P 109, Sel'khozgiz, 1954.

SOKOLOV, N. I. (Lecturer)   and   WAINTRAUB, A. A. (Assistant, Department of Obstetrics and Gynecology)

"Use of penicillin for prophylaxis of the postnatal infection in cows," Collected Works No. 14, of Leningrad Veterinary Institute USSR Ministry of Agriculture, P 119, Sel'khozgiz, 1954.

SOKOLOV, N.I., dotsent.

Use of phytoncides of onion and garlic in gynecological diseases.
Veterinariia 31 no.2:51-52 F '54.   (MLRA 7:2)

1. Leningradskiy veterinarnyy institut.
           (Phytoncides) (Genitourinary organs--Diseases)

SOKOLOV, N.I., dotsent.

Use of conifer chlorophyll carotene paste for treating vaginitis and endometritis in cows. Veterinariia 32 no.2:60-61 F '55.

(MLRA 8:3)

1.Leningradskiy veterinarnyy institut.

(COWS--DISEASES) (VETERINARY MATERIA MEDICA AND PHARMACY)

SOKOLOV, N. I.

Sokolov, N. I.

"The etiology, therapy, and prophylaxis of sterility in cattle on the
sovkhozes and kolkhozes of the Leningrad suburban area." Leningrad
Veterinary Inst, Min Higher Education USSR. Leningrad, 1956.
* (Dissertation for the Degree of Doctor in Sciences.)

 * degree of Doctor of Veterinary Sciences

Knizhnaya Letopis'
No. 25, 1956. Moscow.

Name: SOKOLOV, Nikolay Ivanovich

Dissertation: Etiology, therapy and prophylaxis
of sterility in cattle of sovkhozes
and kolkhozes

Degree: Doc Vet Sci

Affiliation: /Not indicated/

Defense Date, Place: 14 Jun 56, Council of Leningrad Vet
Inst

Certification Date: 20 Apr 57

Source: BMVO 14/57

SOKOLOV, N.I., doktor veter.nauk

Characteristics of the course of postnatal infection and septic
endometritis in cows. Veterinariia 37 no.1:41-44 Ja '60.
(MIRA 16:6)

1. Leningradskiy veterinarnyy institut.
(Endometriosis) (Cows--Diseases)

SOKOLOV, N.I., doktor veterinarnykh nauk

Treatment of cows with puerperal infection. Veterinariia 37 no.12:
48 D '60.   (MIRA 15:4)

1. Leningradskiy veterinarnyy institut.
                              (Veterinary obstetrics)

SOKOLOV, Nikolay Ivanovich; VAYNTRAUB, Aleksandr Moiseyevich
[deceased]; POLYAKOV, P.Ya., red.; YAKOVLEVA, V.K., tekhn.
red.

[First aid in calving] Pervaia pomoshch' pri otelakh. Izd.2.,
dop. i ispr. Leningrad, Sel'khozgiz, 1961.   69 p.
(MIRA 15:8)

(Veterinary obstetrics)

SOKOLOV, N.I.

Diphyllobothriasis of predatory fishes. Veterinariia 41 no.9:66
S '64.   (MIRA 18:4)

1. Starshiy veterinarnyy vrach Ivanovskoy oblastnoy veterinarnoy
laboratorii.

SOLOTOV, N. I.

Mjr., Chita Mil. Hosp., -c1948-c49-. Cand. Medical Sci. Lt. Col., Med. Corps, -c1949-.
Medicine. "Conduction Anesthesia of the Brachial Plexus through the Posterior Scala
Aperture," Vest. Khirurgii, 68, No. 3, 1948; "Operative Treatment for Congenital Hernia
Cerebri on the Forehead," Vest. Oto-rino-laringol., No. 2, 1949.

SOKOLOV, N. I.

PA 17/49T97

USSR/Medicine - Anesthesia, Conduction   Mar 48
    Medicine - Anesthesia, Local and Regional

"Conduction Anesthesia of the Brachial Plexus Through
the Posterior Scala Aperture," N. I. Sokolov,
Chitinsk Mil Hosp, 4 pp

"Vest Khirurgii" Vol LXVIII, No 3

Explains disadvantages of Kulenkampf's method.
Sokolov describes own method in detail. Has used
it 130 times.

17/49T97

31032.   SOKOLOV, N. I.

Vduvanie vozdukha kak metod profila kfiki i lecheniya tugopodvizhnosti
v susta vakh posle travm. Vestnik khirurgii im. Grekova, 1949, No. 4, s. 31-33

SOKOLOV N. I. Operative treatment of battle injuries of peripheral nerves
Khirurgiya 1949, 11 (48-54)

The author reviews a number of operations of battle injury: 115 on the
peripheral nerves of the upper limb (22 on the brachial plexus and 1 on
the cervical plexus), 79 on the peripheral nerves of the lower limb and
15 on the sympathetic nervous system. The procedures were as follows:
neurolysis 114, suture 37, partial suture 39, neurectomy 4, periarterial
sympathectomy 2, and ganglionectomy 13. In 63 cases there was major
bone injury and in 14 cases major blood vessel injury. Trophic ulcers
were present in 6 cases of sciatic palsy, contractures in 26 cases, and
causalgia in 20 cases. The period between wounding and operation varied
between 1½ months to 2 months after injury if there was no recovery of
nerve function, except in brachial plexus and sciatic injury when the
period was increased to three months. Sepsis and severe limb contractures
were contraindications, unless in the latter there was associated and
marked causalgia. In cases of delayed primary suture three weeks was the
usual interval. For treatment of causalgia the author inclines to operation,
with emphasis on the exclusion of local nerve lesions such as division or
scarring before turning to sympathectomy. Thus in 6 cases excision of a
lateral neuroma and partial suture was successful in relieving symptoms.
Periaterial sympathectomy was abandoned as useless for this purpose.
Cervical and lumbar sympathectomy gave the best results; in 9 cases out

of 10 the condition improved considerably or was cured. Endoneurolysis performed in 5 cases on the sciatic nerve was found to be technically difficult and did not relieve pain. Mobilization of the nerve ends was used to overcome defects of up to 6 or 7 cm., but larger gaps were bridged by homotransplants in 3 cases and by an autotransplant in 1 case. When the sciatic nerve was damaged at its exit from the pelvis and the proximal fragment had retracted beyond reach, the superior gluteal nerve was sutured to the distal fragment. Neurolysis caused varying degrees of improvement, either motor or sensory in 90% of cases, but resection of neuromata gave on the whole better results. In 2 cases of severe causalgia sub-arachnoid injection of alcohol at the levels of the affected nerve roots was found ineffective. The disposal of 105 patients was known; 51 returned to army duties, 48 were temporarily unfit and 6 were totally unfit. (This report gives no details of degrees of recovery, but only outlines results in general form.)

Zinovieff – World Medical Abstacts (IX, 8)

So: Neurology & Psychiatry Section VIII, Vol. 4, No. 1-6

SOKOLOV, N.I.

Ligature of the left gastric artery in connection with operative immobilization of the stomach. Khirurgiia, Moskva, No.5:5-13 May 50.
(CIML 19:4)

1. Chita.

SOKOLOV, N.I.

Congenital encephalocele. Khirurgiia no.9:37-42 S '54. (MLRA 7:12)

(ENCEPHALOCELE,
congen.)

SOKOLOV, N.I. (L'vov)

Spontaneous clonus of muscles of the abdominal wall as a symptom
of spinal diseases. Klin. med. 32 no.8:71 Ag '54.   (MLRA 7:10)
        (SPINE, diseases,
            manifest., clonus of abdominal wall)
        (ABDOMINAL WALL, diseases,
            clonus, as manifest. of dis. of spine)

SOKOLOV N.I., kandidat meditsinskikh nauk, L'vov, ul. Krupskoy, d. 19., kv. 10.

Metal nails fit for irrigation for intramedullary nailing of long bones. Vest.khir. 75 no.5:122-125 Je '55.   (MLRA 8:10)
        (FRACTURES, surgery,
            intramedullary nailing with irrigation)
        (IRRIGATION,
            in intramedullary nailing)

SOKOLOV, N.I., kandidat meditsinskikh nauk; L'vov, ul. Krupskoy 12, kv.10.

Ligature holders. Vest.khir.75 no.6:135-137 Jl '55.(MLRA 8:10)
  (SURGERY, OPERATIVE, appratus and instruments
       case for ligatures)
  (SUTURES
       ligatures, spherical & cylindrical cases)

SOKOLOV, N.I., kand.med.nauk (L'vov, ul. Krupskoy, d.12, kv. 10)

Prevention of mistakes in the treatment of fractures of the long bones by medullary nailing. Nov.khir.arkh. no.6:27-32 N-D '58.
(MIRA 12:3)

(FRACTURES)

BOROVSKIY, Viktor Anastasyevich; SOKOLOV, Nikolay Ivanovich

[Organizational and economic consolidation of the collective
farms of Kazakhstan] Organizatsionno-khoziaistvennoe ukreple-
nie kolkhozov Kazakhstana. Alma-Ata, Kazgosizdat, 1961.   117 p.
                                        (MIRA 15:8)
            (Kazakhstan—Collective farms)

SOKOLOV, N.I., inzhener; PANINA, A.V. inzhener.

Method of air separation for reclamation of used burned foundry
sands; experience of the Krasnaia Vagranka Plant. Proizv.-tekh.
inform. no.2:39-43 '51.   (MLRA 10:3)
        (Sand, Foundry) (Separators (Machinery))

ANGELOV, I.I.; PEVTSOV, G.A.; SOKOLOV, N.I.; DMITRIYEVA, N.S.

Preparation of spectrally pure salts of cesium and rubidium.
Trudy IREA no.23:40-46 '59.   (MIRA 13:7)
          (Cesium salts) (Rubidium salts)

SOKOLOV, N.I., inzh.

New equipment for preparing keramzit granules. Stroi. mat. 9
no.10:35 O '63.   (MIRA 16:11)

Sokolov, N. I.

I-26

USSR/Chemical Technology. Chemical Products
        and Their Application--Synthetic fibers

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10096

Author : Angelov, I. I. and Sokolov, N. I.,
Inst   : All-Union Science Research Institute for Chemical
         Reagents
Title : On the Utilization of Perchloroethylene Filters
         in the Production of Chemical Reagents.

Orig Pub: Tr. Vses. n.-i. in-ta khin. reaktivov, 1956, No 21,
          102-104

Abstract: Perchloroethylene filters are suited for the
          production of corrosive chemical reagents because
          of their chemical inertness which eliminates the
          contamination of the solutions. At 90-95° perch-
          loroethylene is not affected by long contact with
          aqua regia, melanzh /TN: presumably a mixture of
          reagents/, H₂ SO₄, HNO₃, HCl, alkaline solutions
          solutions of all concentrations, various salts,

Card 1/2

SOV-120-58-1-2/43

AUTHORS: Kondrashev, L.F., Kurashov, A.A., Linev, A.F., Sidorov, V.A., Sokolov, N.I. and Khaldin, N.N.

TITLE: A Spectrometer for Fast Neutrons (Spektrometr bystrykh neytronov)

ABSTRACT: The measurement of the fast neutron spectrum is one of the most difficult problems of experimental nuclear physics. The most common method employed in neutron spectroscopy in the energy region of a few MeV is the method of proton recoil. The measurement of the neutron spectrum is reduced to the measurement of the spectrum of the recoil protons which are produced by the neutron beam in a specimen containing hydrogen. There are a number of methods of measuring the proton spectrum. One of these is the nuclear emulsion method but this is very time-consuming and therefore not always convenient. The other methods employ coincidence circuits. Such a system is usually called a "telescope". These telescopes can be used in two ways. In the first method one measures the range of the protons in special absorbers between the counters and in the second method one measures the amplitudes of the pulses from a scintillation counter which is the last

Card 1/3

A Spectrometer for Fast Neutrons.

counter of a telescope. The first of these was used in the
present work. The telescope (Fig.1) consists of 4 proportion-
al counters. A polyethylene "radiator" is placed in front
of the first counter and two sets of aluminium absorbers are
used to measure the range of recoil protons in aluminium. The
first and main set of absorbers is placed in front and the
third counter and the second set of filters in front of the
fourth one. The first, second and third counters are in
coincidence and the fourth in anti-coincidence. Thus one
records recoil protons formed in the radiator and whose path
ends before the fourth counter. An estimate of the proton
loss due to multiple scattering was made, using the curves
of Dickinson and Dodder (Ref.2). The figure obtained for
this loss was less than 5% of the recoil protons. A photo-
graph of the telescope is shown in Figs.2 and 3. The tele-
scope can be used in studying not only neutrons but also
charged particles. The spectrometer was used to study the
reaction $T(p, n) He^3$ for proton energies between 7 and
12 MeV. The neutrons were obtained at a target of a 1.5 m.

Card 2/3

SOV-120-58-1-2/43

A Spectrometer for Fast Neutrons.

cyclotron. The derived neutron spectrum at zero angle for the above reaction is shown in Fig.5. The following persons are thanked for their cooperation: N. A. Vlasov, S. P. Kalinin, A. A. Shubin and L. N. Samoylov. There are 5 figures, no tables and 6 references, of which 2 are English and 4 Soviet.

SUBMITTED: June 19, 1957.

1. Neutron spectrum analyzers--Equipment   2. Neutron spectrum analyzers--Performance   3. Neutron spectroscopy

Card 3/3

S/120/60/000/004/012/028
E032/E414

21.2200

AUTHORS: Kondrashev, L.F., Rybin, S.N., Sokolov, N.I. and Khaldin, N.N.

TITLE: Thin Vacuum-Tight Windows

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.4, pp.102-105

TEXT: In nuclear reaction studies it is frequently necessary to have thin vacuum-tight windows.   The present paper describes some of the designs of such windows which were used in experiments on a 1.5 m cyclotron in which these windows were used for gas targets, vacuum chambers and other devices.   The simplest solution of this problem which ensures that the thin window is in a vacuum-tight contact with the body of the apparatus is to solder the window to the body or to attach it with a suitable adhesive.   However, this leads to a certain amount of contamination of the evacuated region during the soldering process and the contamination is difficult to remove.   In the case of soldering, a further difficulty is encountered since it is difficult to attach the window uniformly over the perimeter.   As a result, the thin window is nonuniformly loaded when the apparatus is evacuated.   The heating of the material of the window during soldering may lead to nonuniform

Card 1/

S/120/60/000/004/012/028
E032/E414

Thin Vacuum-Tight Windows

changes in its mechanical properties which are also undesirable;
and non-demountable designs present difficulties when it is desired
to replace the windows. Fig.1 (1 - window, 3 - thin foil,
4,5 - rubber packing) shows a demountable form of a window in which
the thin foil has a cylindrical form and vacuum tightness is
ensured by rubber packing. With a gas target of 5 cm in diameter,
window height of 1.2 cm and window length along the circular
periphery of 9 cm, an 8 μ thick iron foil withstood pressures in
excess of 2.5 atm. With a gas target 10.6 cm in diameter and two
windows of 1.7 cm x 5 cm and three windows 2 to 3 cm in diameter,
a 30 μ copper foil withstood pressures up to 1.5 to 2 atm. This
type of window was used by Bogdanov et al (Ref.1) in their studies
of the proton spectra of the reaction $He^4 + d$ at 30°.
Fig.2 (1 - mica plate 10 μ thick, 4 - rubber packing) shows
another type of target in which the window is plain and consists of
a 10 μ thick mica plate maintained in position by brass grids on
either side. The transparency of this arrangement was about 65%.
The window is made vacuum-tight by rubber packing. A plane window

Card 2/6

Thin Vacuum-Tight Windows

designed for working pressures up to 10 atm is shown in Fig.3.
Here again, the foil 3 forming the wall of the window is
supported on a brass grid 4 having a transparency of 70%.
Rubber packing ensures vacuum tightness and 30 μ copper foils and
10 μ iron foils were used with this design.   This type of window
was used by Bogdanov et al (Ref.3) in their studies of the
polarization of neutrons produced in the T(p,n)He^3 reaction.
Fig.4 shows a similar window in which the foil 1 is supported by
a tungsten grid 2 made of 0.2 mm diameter wire.   Fig.5 shows a
design of a thin window used with a β-spectrometer.   The
cylindrical wall of the window 3 was made from aluminium ribbon
0.5 mm thick; rubber packing ensures vacuum tightness.   This
window was used by Vlasov and Rudakov (Ref.4) in their studies of
the angular β-γ correlation in the case of Ba^{139}.   Finally,
Fig.6 shows the design of a gas target with a plane, thin wall 3
which was used by Bogdanov et al (Ref.5) in their studies of the
spectrum of fast neutrons produced in the bombardment of
deuterium by deuterons.   Here a platinum foil 30 μ thick is
soldered to the body.   The foil is separated by a grid of tungsten
Card 3/6

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S/120/60/000/004/012/028
E032/E414

Thin Vacuum-Tight Windows

wires 3. The window was found to withstand pressures up to 4 atm. The above devices were assembled and prepared for experiments by A.A.Shubin. There are 6 figures and 5 Soviet references.
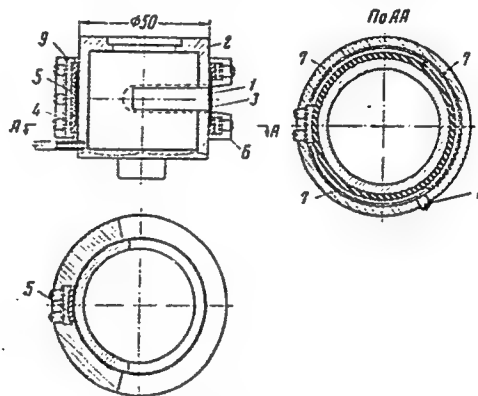
SUBMITTED: May 27, 1959

Fig.1.

Card 4/6

Рис. 1. Газовая мишень с тонкой цилиндрической стенкой

SOKOLOV, N.I.

Effect of "a dangerous area" on the accuracy of constructing
photogrammetric nets. Geod.i kart. no.12:46-50 D '62.
(MIRA 16:2)

(Aerial photogrammetry)

SOKOLOV, N.I., aspirant-zaochnik

Using the theory of matrices to solve problems of adjusting
photogrammetric nets. Trudy MIIGAIK no.49:75-81 '62. (MIRA 16:6)

1. Kafedra fotogrammetrii Moskovskogo instituta inzhenerov
geodezii, aerofotos"yemki i kartografii.
                    (Matrices) (Aerial photogrammetry)

SOKOLOV, N.I.; KHAIDIN, N.N.; ZEVIAKIN, ...No; ...

    Vacuum slide-valves. Prib. i tekh. eksp. 8 no.6:137-140
N-D '63.
                                                    (MIRA 17:6)

ACCESSION NR: AP4033108   S/0120/64/000/002/0061/0063

AUTHOR: Lamunin, V. I.; Rudakov, V. P.; Serikov, I. N.; Sokolov, N. I.; Khaldin, N. N.

TITLE: Vacuum scatter chamber for studying charged-particle reactions

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 61-63

TOPIC TAGS: scatter chamber, vacuum scatter chamber, nuclear measurement, particle reaction, particle scattering

ABSTRACT: A scatter chamber (see Enclosure 1) consists of a steel housing 1, lower lid 2, and upper movable lid 3. The primary particle beam, restricted by graphite diaphragms 4 and 5, passes the filter chamber 6 and is collimated by a set of tantalum diaphragms. Then, the beam strikes the target and goes into the Faraday cylinder. Filter disks 7 are remote-operated by ShI-11 step-by-step telephone-type switches located inside the filter chamber. Diaphragms 8 and 10

Card 1/3

ACCESSION NR: AP4033108

belong with the collimator, while diaphragms 9 and 11 remove fringe particles.
Detectors are fastened to the movable lid 3 by means of a nipple 15 which is
positioned at an angle of 10° from the central plane of the chamber. The
recording angle can be varied within 10°–170° without disturbing the vacuum.
Remote control is provided for the detector position, target replacement, and
filter changes in the primary and secondary beams. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 01Jun63   DATE ACQ: 11May64   ENCL: 01

SUB CODE: NS   NO REF SOV: 004   OTHER: 001

Card 2/3

L 05070-67   EWT(d)/EWP(r)/EWP(k)/EWP(h)/EWP(l)
                                    Monograph   UR/

ACC NR: AM6018988   24
                                                                       B+1 14

Sokolov, Nikolay Ivanovich

Analytical method of synthesis of linearized automatic control systems
   (Analiticheskiy metod sinteza linearizovannykh sistem avtomaticheskogo
   regulirovaniya) Moscow, Izd-vo "Mashinostroyeniye", 1966.   327 p.
   illus., biblio.   Errata slip inserted.   6500 copies printed.

TOPIC TAGS: linear automatic control system, control system synthesis,
   analytic method

PURPOSE AND COVERAGE: This monograph presents a simple and effective
   method for synthesizing linearized automatic control systems which is
   based on generalization and development of known ideas and on new
   relationships and laws derived by the author.   The possibility of
   realizing the analytic relationships which have been found by means of
   simple, technically feasible, physical elements is taken into con-
   sideration in formulating and solving the problem of synthesizing
   automatic control systems.   This method for synthesizing automatic
   control systems can be divided into three principal stages: 1) deter-
   mining the desired transfer function for a control system in closed
   state; 2) selecting the actuator and the transfer relation of the
   reduction gear; and, 3) determining the structural design and the

Card   1/6   UDC 629.13: 62-50.001.1

L 05070-67
ACC NR: AM6018988

parameters of the projected automatic control system. In the first
stage of synthesis (Chapters IV—X, XIV), the desired transfer func-
tion is determined which satisfies each of the following quality
criteria separately, or several combined simultaneously: control time,
order of astatism, magnitude of overshooting, error factors, value
of the dynamic error, minimum root mean square error, etc. for
various types of control and input signals applied to the measuring
element and the controlled system. In the second stage (Chapter
XI), the magnitudes of the displacement, the velocity, and the acceler-
ation of the output coordinates of the actuator are determined in
accordance with the desired transfer function of the system and that
of the controlled system, then the required power of the actuator and
the transfer relationship of the reduction gear are determined for
known loads, including nonlinear loads. In the third stage (Chapters
XII-XVII), the total structural design of the projected system, the
amplification factor of the system in open state, and the transfer
function of the automatic control system in closed state are deter-
mined. The corresponding system of equations derived here is always
mathematically solvable. The second and third stages of this method
are self-contained. If the desired transfer function of the system
or controller is found by any method, it is easy to find the design
and parameters of the synthesized system. This book is intended for

Card 2/6

ACC NR: AM6018988

engineers and technical workers engaged in designing automatic control
systems and should be useful to advanced undergraduate and graduate
students.

TABLE OF CONTENTS [abridged]:

Card 3/6

L 05070-67

ACC NR: AM6018988

Ch. III. General information -- 37

Ch. IV. Determining the desired transfer function of automatic control systems with a given order of astatism acted upon by given useful signals -- 56

Ch. V. Determining the desired transfer function of automatic control systems with a given order of astatism acted upon by useful signals and by noise -- 77

Ch. VI. Determining the desired transfer function of automatic control systems with a given order of astatism acted upon by a random stationary useful signal -- 85

Ch. VII. Determining the desired transfer function of automatic control systems with a given order of astatism acted upon by random stationary noise -- 103

Ch. VIII. Determining the desired transfer function of automatic control systems with a given order of astatism having random stationary inputs and some given regular useful signals -- 114

Card 4/6

ACC NR: AM6018988

Card 5/6

L 05070-67

ACC NR: AM6018988

SUB CODE: 13/ SUBM DATE: 08Jan66/ ORIG REF: 057/ OTH REF: 006/

Card 6/6

CHCLOV, . . L.

Docent, Moscow Energetics Inst. im. V. M. Molotov, -cl949-.   Cand. Technical Sci.
"Construction and Use of Complex Substitution Systems in Complex Non-Symmetrical
Circuits," Elektrichestvo, No. 8, 1949.

SOKOLOV, N. I.

Electric Resistance

Using non-linear resistances for increasing the stability of exciters for synchronous generators.   Elek. st. 23 no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952.   UNCLASSIFIED

SOKOLOV, Ni. I.

On 31 May 1946, at the Power Engineering Institute imeni Molotov, defended his dissertation on "The Elements of Calculating Short-Circuit Currents in Internal Breakdown of Asynchronous Motors". Official opponents – Doctor of Technical Sciences Professor D. A. Gorodskiy, and Candidate of Technical Sciences Docent V. L. Fabrikant.

So: Elektrichestvo, No 4, April 1947, pp 90-94 (U-5577, 18 February 1954)

Methods were presented for calculating certain complex cases of nonsymmetry in asynchronous motors. Cases of series and parallel nonsymmetry were investigated by means of matrical algebra using the mithods of breaking down the resistances to symmetrical components and circuits of all series members through self-inductive resistances. The method was illustrated with examples of analytic calculations and of calculations on direct-current panels. The determination of reactive resistances of a motor was also investigated for individual portions of the winding. It was found possible to discover, in the curve of the ampere windings of the air gap, harmonics of a wavelength equal to the full internal diameter of the stator, as well as harmonic multiples of these.

The use of matrical algebra was demonstrated for building equivalent circuits. A method was worked out for calculating supplemental harmonics in multipolar machinery, and the effect of the rotor on the harmonics of leakage in the air gap were examined.

So: IBID

SOKOLOV, N. I.

AID P - 3258

Subject   : USSR/Electricity

Card 1/2   Pub. 27 - 13/25

Authors   : Khachaturov, A. A., Eng., and N. I. Sokolov, Kand. Tech. Sci.,
Moscow

Title   : Automatic reclosure without controlling synchronism

Periodical : Elektrichestvo, 9, 64-67, S 1955

Abstract   : The authors present the results of experiments with automatic
reclosure of two parts of a power system consisting of several
steam electric power stations, without controlling for synchronism.
Tests were made with values of transmitted capacity ranging from
zero to the maximum possible and with disconnection periods varying
from 1 to 6.4 sec. (see table). In all these tests normal operating
conditions were reestablished without asynchronous motion except
for the most difficult conditions of 6.4 sec of interruption at
the highest transmitted capacity. Synchronous machinery were
returned to synchronism in the first cycle of swinging. Voltage
drops were of short duration. One table, 5 diagrams and

AID P - 3258

Elektrichestvo, 9, 64-67, S 1955

Card 2/2   Pub. 27 - 13/25

oscillograms, 1 Soviet reference, 1950.

Institution : None

Submitted   : N 26, 1954

SOKOLOV, N.I., kandidat tekhnicheskikh nauk.

Approximate analytic method used for calc [illegible] transients in
linear systems of automatic control. Trudy [illegible] no.75:73-102 '57.
(Automatic control)   (MLRA 10:6)
(Transients (Electricity))

SOKOLOV, N.I., kandidat tekhnicheskikh nauk; MEDVEDEV, B.P., kandidat
tekhnicheskikh nauk; UL'YANOV, S.A., kandidat tekhnicheskikh nauk.

"Operation of asynchronous electric motors" by I.A.Syromiatnikov.
Reviewed by N.I.Sokolov, B.P.Medvedev, S.A.Ul'ianov. Elektrichest-
vo no.1:95-96 Ja '57.   (MLRA 10:2)

1. Kafedra "Elektricheskiye stantsii "Moskovskogo Energeticheskogo
instituta im.Molotova.
            (Electric motors, Induction)   (Syromiatnikov, I.A.)

SOKOLOV, N.I., kandidat tekhnicheskikh nauk.

Using transfer functions and inverse transfer functions expressed
in trigonometric form in calculating automatic control systems.
Trudy MAI no.75:26-39 '57.   (MLRA 10:6)
                (Automatic control)   (Functions)

AUTHOR: SOKOLOV,N.I., cand.tech.sc.   PA - 3100
TITLE: Steady-State Stability of a Transmission System with Regulated
        Synchronous Compensator at the Sectionalizing Substations.
        (Staticheskaya ustoychivost' peredachi s reguliruyemyme sinkhron-
        nymi kompensatorami na promezhutochnykh podstantsiyakh, Russian)

PERIODICAL: Elektrichestvo, 1957, Nr 5, pp 25-30 (U.S.S.R.)
             Received: 6 / 1957   Reviewed: 7 / 1957

ABSTRACT: The experiments carried out in 1937 by LEBEDEV concerned only an
           ideal regulation and were incomplete. In the last few years, however,
           investigations have been carried out in the Central Scientific Elec-
           trotechnical Research Laboratory of the MES. They showed that for
           the increase of electrical transmission output for further trans-
           mission it is technically useful to employ intermediate synchronous
           compensators. Their application is particularly useful if power is to
           be taken off at intermediate points of the line. The set up of the
           substations does not become more complicated through the use of
           synchronous compensators and in most cases it does not become at all
           necessary to set up additional transformers. The position of the
           synchronous compensators and their power must be defined on the
           basis of technical and scientific considerations. The synchronous
           compensators at the intermediate substations can work with idle

Card 1/2

Cent. Sci Res Electrotech. Laboratory
Min. Electristations

KALNYSHEV, M.V., kapitan, voyennyy letchik-instruktor pervogo klassa;
SOKOLOV, N.I., leytenant, voyennyy letchik tret'yego klassa;
MALENEV, V.A., leytenant, voyennyy letchik tret'yego klassa;
DROZD, M.I., leytenant, voyennyy letchik tret'yego klassa

We support this project. Vest.Vozd.Fl. no.2:84-85 F '60.
(MIRA 13:7)

(Flight training)

SOKOLOV N. I.

Some Methods of Calculating (XXXXX) Automatic Control   SOV/3397
Systems and their Components; Leningrad, 1959, 123p.*
    Sokolov, N.I., Candidate of Technical Sciences. Analytical Method of
        Approximate Calculation of Transients in Certain Nonlinear Systems
        of Automatic Regulation   27

The author presents a method of calculating transients in systems of
    automatic regulation containing nonlinear components with a con-
    tinuous static characteristic of the saturation type. The author
    claims that this method, compared with the methods developed by
    Ya. Z. Tsypkin and B.N. Naumov, gives a much smaller error, which
    increases integration interval and, consequently, reduces calcu-
    lation time. In order to apply the author's method, conditions
    permitting the separation of the nonlinear components, whose
    characteristics can be given in analytical or in graphical form,
    must be present.

Bibliography   38
Sokolov, N.I., Candidate of Technical Sciences. Approximate Grapho-Ana-
    lytical Method of Determining Amplitude-Phase Characteristics From
    Transient Functions

The author describes the method in which transient functions were obtained
    experimentally
            Trudy, vyp 112, Moscow Aviatsionnyy in-ta im. Sergo Ordzhonikidze

SOKOLOV, N I.   PHASE I   BOOK EXPLOITATION   SOV/3605

Kolosov, S.P., N.P. Kolpakova, N.I. Sokolov, A.K. Ter-Akopov,
    N.M. Tishchenko, and N.P. Udalov

Rukovodstvo po proyektirovaniyu elementov i sistem avtomatiki;
    posobiye po kursovomu i diplomnomu proyektirovaniyu, vyp. 3
    (Manual on Designing Automation Systems and Components; Hand-
    book for Term and Degree Projects, No. 3) Moscow, Oborongiz,
    1959. 200 p. (Series: Moscow. Aviatsionnyy institut im.
    Sergo Ordzhonikidze) Errata slip inserted. 12,500 copies
    printed.

Sponsoring Agency: R.S.F.S.R. Ministerstvo vysshego i srednego
    spetsial'nogo obrazovaniya.

Ed. (Title page): B.N. Petrov, Corresponding Member, USSR Academy
    of Sciences, Professor; Ed. (Inside book): I.L. Yanovskiy,
    Engineer; Ed. of Publishing House: M.S. Anikina; Tech. Ed.:
    V.P. Rozhin; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This textbook is intended for term and degree projects of students in

Card 1/4

SOKOLOV, N.I

SOKOLOV, N.I.

28(1)   PHASE I BOOK EXPLOITATION   SOV/2309

Ageykin, Dmitriy Ivanovich, Mikhail Aleksandrovich Balashov, Sergey
Petrovich Kolosov, Valentina Ivanovna Nefedova, Yevgeniy Mikhaylo-
vich Reshetnikov, Nikolay Ivanovich Sokolov, Vasiliy Mikhaylovich
Stroilov, Nikolay Mikhaylovich Tishchenko, and Nikolay Petrovich
Udalov

Rukovodstvo po proyektirovaniyu elementov i sistem avtomatiki; posobiye
po kursovomu proyektirovaniyu (Handbook on the Design of Automatic
Control Elements and Systems; Textbook for Term Projects in Design)
No. 2. Moscow, Oborongiz, 1959. 247 p. (Series: Moscow. Aviat-
sionnyy institut im. Sergo Ordzhonikidze) Errata slip inserted.
17,500 copies printed.

Ed. (Title page): B.N. Petrov, Corresponding Member, USSR Academy
of Sciences, Professor; Ed. (Inside book): V.N. Istratov, Candi-
date of Technical Sciences; Ed. of Publishing House: E.A. Shekht-
man; Tech. Ed.: V.P. Rozhin; Managing Ed.: A.S. Zaynovskaya.

PURPOSE: This is a textbook for students of the electromechanical de-
partments of vuzes working on term- and diploma design projects.

Card 1/4

COVERAGE: The authors discuss basic problems in the design of auto-
matic-control system elements, such as transducers, relays, clutches,
and power transformers. They also describe servo systems, parti-
cularly autopilots, and present numerical examples of calculating
systems parameters. Typical assignments for students working on
term design projects are also presented. The book was written by
part of the teaching staff of Moscow Aviation Institute imeni Sergo
Ordzhonikidze, under the direction of Professor B.N. Petrov, Cor-
responding Member, USSR Academy of Sciences. Chapter I was written
by D.I. Ageykin; Chapter II, by S.P. Kolosov and M. A. Balashov;
Chapter III, by V.I. Nefedov; Chapter IV, by Ye. M. Reshetnikov;
Chapter V, by N.P. Udalov; Chapter VI, by N.M. Tishchenko; Chapter
VII, by N. I. Sokolov; and Chapter VIII, by V.M. Stroilov. The
authors thank Docents V.N. Istratov, S.P. Inozemtsev and A.P.
Khokhlov, Candidates of Technical Sciences, for reviewing the book.
There are 69 references, all Soviet (including 2 translations).

Some chapters may also be useful to engineering personnel working
with automatic control systems.

AVAILABLE: Library of Congress

Card 4/4   JP/bg
                                                            9-30-59

GLEBOV, N. I., VENIKOV, V. A., GERTSENBERG, Grigoriy R., KOSTENKO, M. P., NEYMAN, L. R., SOVALOV, S. A.,

"Excitation control of synchronous machines in power systems of the Soviet Union"

report to be submitted for Intl. Conference on Large Electric Systems (CIGRE), 18th Biennial Session, Paris, France, 15-25 Jun 60.

Safonov, A.

PHASE I BOOK EXPLOITATION   SOV/4607

Moscow. Aviatsionnyy institut im. Sergo Ordzhonikidze

Nekotoryye voprosy analiza i sinteza sistem avtomaticheskogo regulirovaniya;
  sbornik statey (Problems in the Analysis and Synthesis of Automatic Control
  Systems; Collection of Articles) Moscow, Oborongiz, 1960. 74 p.
  (Series: Its: Trudy, vyp. 121) Errata slip inserted. 6,150 copies printed.

Sponsoring Agencies: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya
  RSFSR; Moskovskiy ordena Lenina aviatsionnyy institut im. Sergo Ordzhonikidze.

Ed. (Title page): B.N. Petrov, Corresponding Member, Academy of Sciences USSR,
  Doctor of Technical Sciences, Professor; Managing Ed.: A.S. Zaymovskaya,
  Engineer; Ed. (Inside book): V.M. Tokar'; Tech. Ed.: I.M. Zudakin.

PURPOSE: This collection of five articles is intended for scientific, engineer-
  ing and technical personnel at plants, design offices and scientific research
  institutes, and for teachers and students of advanced courses at schools of
  higher education.

Card 1/3

Problems in the Analysis and Synthesis (Cont.)   SOV/4607

COVERAGE: The articles discuss procedures for synthesizing linear automatic con-
trol systems, analyzing free oscillations of linear systems with variable
parameters, calculating the design parameters of a ferroresonant circuit in
order to obtain a relay action, and investigating the stability of linear and
some nonlinear systems by using the energy method. The method for the synthesiz-
ing of systems makes it possible to determine the desired amplification factor
of the system in the open condition, and the layout and parameters of parallel
compensating devices and their connection, so as to satisfy the technical re-
quirements imposed on the characteristics of the transient process. Some of the
articles in the collection develop existing methods, while others present new
methods for investigating automatic control systems with variable parameters.
The methods presented may be used for the solution of a number of problems in
the theory of oscillations of linear and nonlinear systems. Special consider-
ation is given to the application of methods for the construction of approx-
imate representations of the general solution of the equation of free oscil-
lations. No personalities are mentioned. There are 16 references, all Soviet.

TABLE OF CONTENTS:

Foreword   3

Sokolov, N.I. [Candidate of Technical Sciences] Some Problems in the
Selection of Design Configurations and Parameters of Aircraft Control Systems 5
Card 2/3

SOKOLOV, N.I., kand.tekhn.nauk, dotsent

Variable-polarity excitation of synchronous reactive power
compensators for operation which involves consumption of
reactive power. Elektrichestvo no.5:28-31 My '60.
(MIRA 13:9)

1. Moskovskiy energeticheskiy institut.
(Electric machinery, Synchronous)

VENIKOV, V.A., doktor tekhn.nauk; GERTSENBERG, G.R. kand.tekhn.nauk;
KOSTENKO, M.P., akademik; NEYMAN, L.R.; SOVALOV, S.A., kand.tekhn.
nauk; SOKOLOV, N.I., kand.tekh.nauk

Strong regulation in electric systems. Elek.sta. 31 no.6:43-49
Je '60.   (MIRA 13:7)

1. AN SSSR (for Kostenko). 2. Chlen-korrespondent AN SSSR (for
Neyman).
        (Electric power distribution)
        (Voltage regulators)

SOKOLOV, N.I., kand.tekhn.nauk

Questions about the selection of structural networks and parameters
of controllers of aviation equipment. Trudy MAI no. 121:5-30 '60.
(MIRA 13:10)
(Automatic control) (Aeroplanes--Equipment and supplies)

BALASHOV, M.A.; VORONKOV, B.S.; YELAGIN, Ye.B.; KISELEV, L.N.; KOLOSOV, S.P.; LEONT'YEVA, V.P.; NEFEDOVA, V.I.; STROMILOV, V.M.; SOKOLOV, N.I.; TISHCHENKO, N.M.; UDALOV, N.P.; PETROV, B.N., akademik, red.; GRIGORASH, K.I., red. izd-va; ROZHIN, V.P., tekhn. red.

[Handbook on the design of components and systems of automatic control; a manual for the preparation of course and diploma projects] Rukovodstvo po proektirovaniiu elementov i sistem avtomatiki; posobie po kursovomu i diplomnomu proektirovaniiu [By] M.A.Balashov i dr. Pod red. B.N.Petrova. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz. No.4. 1961. 311 p.
(MIRA 15:3)

1. Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze.
(Automatic control) (Electronics)

SOKOLOV, N.I., kand.tekhn.nauk, dotsent (Moskva); GUREVICH, Yu.Ye., inzh.
(Moskva); KHVOSHCHINSKAYA, Z.G., inzh. (Moskva)

Use of analog computers for simulating a system with multiple
generators. Elektrichestvo no.5:1-8 My '61.   (MIRA 14:9)
                    (Electric network analyzers)
                    (Electric power distribution)

16.8000 (1031, 1132, 1329)

32060
S/024/61/000/006/008/019
E140/E335

AUTHOR   Sokolov, N. I   (Moscow)

TITLE·   On the synthesis of higher-order astatic systems

TEXT   At the present time partially invariant dynamic
systems (λ-order astatism, $\lambda \geq 2$) are constructed in the form
of "double-channel" systems, although it has been demonstrated
that such systems may be constructed in the form of "single-
channel" λ-order astatic dynamic systems with branches composed
of parallel-connected integrating and amplifying branches
These circuits are very difficult to design and the present
article gives a method for the synthesis of single-channel
λ-order astatic control systems, permitting the required results
to be obtained by means of ordinary internal feedbacks, easily
designed and realized. The starting point of the method is an
uncorrected control system, consisting of the functionally
necessary elements (sensitive element amplifier, controller).

Card 1/3

32060
S/024/61/000/006/003/019
On the synthesis of . .   E140/E335

in which it is necessary to realize λ-order astatism and
transient duration not exceeding a specified time limit. The
correction of the system is to be realized by the introduction
of additional feedbacks. The initial system has a transfer
function with an nth-degree denominator. The λ-order astatism
is defined from the technical conditions by a transfer function
with numerator of not less than $(\lambda-1)$st degree. To introduce
this numerator into the uncorrected system it is also necessary
to increase the degree of the denominator by the same amount, i.e.
to increase the degree to $n + \lambda - 1$. The distribution of
poles in the system is adopted according to the condition of
correction. This fixes the values of the coefficients in the
corrected transfer function. The normalized transient response
to a unit-function input is then examined to see if the transient
condition is satisfied. If necessary, the time scale can be
corrected. The transfer function of the corrective circuit is
found by algebraic manipulation and the means for its physical
realization discussed. The transfer function is decomposed into
partial fractions to permit its realization by a number of

Card 2/7

On the synthesis of ....

32060
S/024/61/000/006/008/019
E140/E335

simple circuits. A numerical example is given for obtaining
fourth-order astatism.
There are 5 figures and 3 Soviet-bloc references.

SUBMITTED: July 15, 1961

Card 3/3

33193

IO 1240

S/535/61/000/139/005/009
E140/E435

AUTHOR: Sokolov, N.I., Candidate of Technical Sciences

TITLE: Determination of the transfer function of an automatic control system satisfying given requirements on the stabilization regime

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.139. 1961. Voprosy avtomaticheskogo regulirovaniya dvizhushchikhaya ob"yektov. 108-118

TEXT: If we distinguish between the structures of automatic control systems in the "control" regime, where the output variable is to follow the variations of an input variable, and the "stabilization" regime, where the output variable is to be stabilized [Abstractor's note: With respect to a fixed reference?] against the influence of external perturbations, certain differences in the treatment of the two cases are possible. The author introduces for the latter case an equivalent control signal which, for a step function of the perturbation he approximates in the form of a second degree function. The extension to arbitrary perturbations is accomplished by means of

Card 1/2

33193
S/535/61/000/139/005/009
Determination of the transfer ...   E140/E435

unit $\triangle$-functions.   The treatment is limited to linear systems.
There are 10 figures and 3 Soviet-bloc references.

Card 2/2

SOKOLOV, N.I., kand.tekhn.nauk

      Operational stability of asynchronous motors with significant
external resistance and parallel connected static condensers.
Elek.sta. 32 · no.6:43-47 Je '61.   (MIRA 14:8)
          (Electric motors, Induction)
          (Electric power distribution)

SOKOLOV, Nikolay Ivanovich, inzh.; MASHKINA, A., red.; POKHLEBKINA, M., tekhn. red.

[Service station]Stantsiia tekhnicheskogo obsluzhivaniia. Moskva, Mosk. rabochii, 1962. 23 p.   (MIRA 15:12)

1. Upravlyayushchiy Stupinskim oporno-pokazatel'nym otdeleniyem "Sel'khoztekhnika" (for Sokolov).
     (Stupino (Moscow Province)--Service stations)

SOKOLOV, N.I., VENIKOV, V.A., GRUZDEV, I.A., KUCHUMOV, A. LUGINSKIY, YA.N.,

"Analogue computer application for analysis of transient processes in electrical systems."

Report to be submitted for the 19th Biennial Session, Intl. Conf. on Large Electric Systems(CIGRE), Paris, France, 16-26 May '62.

VENIKOV,Moscow Power Engineering Inst. im V.M. Molotov
SOKOLOV,   "   "   "   "   "   "
GRUZDEV, Leningrad Polytechinal Inst. im M.I. Kalinin
KUCHUMOV, none given
LUGINSKIY, All-Union Scientific Research Inst. Electro Power Engineering

SOKOLOV, N.I., kand.tekhn.nauk, dotsent; KIRKIN, B.I., inzh.

Determination of the frequency characteristics of synchronous machines. Elektrichestvo no.1:29-35 Ja '62. (MIRA 14:12)

1. Moskovskiy energeticheskiy institut.
(Electric machinery, Synchronous)

16.8000 (1031,1132,1329)

AUTHOR: Sokolov, N.I. (Moscow)

TITLE: Synthesis of automatic control systems with random actions. I

TEXT: The synthesis of linear automatic control systems (a.c.s.) is discussed as follows: 1) On the basis of functionally indispensable elements without which the indirect-action operation is impossible; the structural design is proposed and the orders of polynomials of both the numerator and the denominator for the system transfer function are formulated. 2) The transfer function of a.c.s. is determined on the basis of operational requirements, order of astatism, minimum root-mean error, permissible over-control and duration of transient processes. The orders of the polynomials of the *nominator and the denominator of the transfer function for the corrected a.c.s. depend equally on the orders of polynomials of both

Card 1/3

* numerator (chislitel')

Synthesis of automatic control ...   S/103/62/023/002/002/015
D230/D301

the numerator and the denominator for the transfer function of the
selected uncorrected system and on the form of the transfer func-
tion, describing the compensating elements. The orders of polynomi-
als of the*nominator and the denominator of transfer function for
the uncorrected a.c.s. cannot be changed arbitrarily. Further, the
orders and the polynomial coefficients of both the*nominator and
the denominator of the transfer function for the compensating ele-
ments can be varied within wide limits; as a function of this, the
order of polynomials of both the*nominator and the denominator of
the transfer function for the corrected a.c.s. will vary within wide
limits. In order to obtain the desired transfer function of the a.c.
s. it is first necessary to formulate the normalized transfer func-
tion; this function has known laws of distribution of zeros and po-
les, with the least pole equal to unity. The order values of the
polynomials of the initial normalized transfer function is made
equal to those of the transfer function for the corrected system.
The main difficulty in determining the desired transfer function is
the setting-up of the functional relation between the selected cri-
terion for the system and the time-scale coefficient for various

Card 2/3
* numerator (chislitel')

Synthesis of automatic control ...

S/103/62/023/002/002/015
D230/D301

forms of input signal and noise. The transfer function of the a.c.s. for random stationary input signals is determined. The formula for the time scale coefficient is deduced and its proof given in the appendix. There are 3 Soviet-bloc references.

SUBMITTED: May 27, 1961

Card 3/3

S/103/62/023/003/006/016
D201/D301

16.8000 (1031, 1122, 1329)

AUTHOR: Sokolov, N.I. (Moscow)

TITLE: Synthesis of automatic servo-systems in the presence
              of random disturbances II. Determining the required
              transfer function of an automatic servo-system in the
              presence of random stationary disturbance

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 3, 1962,
              331 – 341

TEXT: In the second part of his work the author suggests a method
of determining the desired transfer function of the follow-up sys-
tem from the condition of satisfying the permissible r.m.s. error,
in the case when the measuring element is acted upon by a random
stationary disturbance. Such a system must filter out this distur-
bance with a permissible r.m.s. error ε_1. Taking into account the
degree of polynomials of the numerator and denominator of the trans- X
fer function of the non-corrected follow-up system and the require-
ments as to the order of the astaticism of the system – an initial

Card 1/2

Synthesis of automatic servo- ...   S/103/62/023/003/006/016
                                        D201/D301

normalized transfer function $K_n(p)$ is chosen. It is necessary to
determine the required transfer function satisfying the set requi-
rements. When a disturbance acts at the system input and it is re-
quired that the system be insensitive to it, it should be as inert
as possible. If this is the case, the duration of the correlation
function $R_n(i\xi_1)$ is much shorter than that of the autocorrelation
function $k_x(i\xi_1)$. The graph of the latter shows that it may be app-
roximated, over a certain range, wider than the correlation func-
tion of noise, to a straight line. In evaluating the r.m.s. error
it is, therefore, enough to know this section of curve $k_x(\tau)$ which
is limited by time $0 - /\tau_1/$. By using this straight line approxima-
tion and using an approximate expression for determining a new ti-
me scale factor z, the expression for the required transfer func-
tion K_r becomes $K_r = K_n(zp)$. It is shown that the error, introdu-
ced in linearizing the graph of the correlation function of the
useful signal, can be always determined. There are 5 tables, 6 fi-
gures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: May 27, 1961

Card 2/2

45746

S/194/62/000/012/013/101
D201/D308

9,7200

AUTHORS: Sokolov, N. I. and Yakushov, V. M.

TITLE: Application of continuous analog computers to static
             d.c. and a.c. simulator computations

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
             no. 12, 1962, 65-66, abstract 12-1-130 ya (Dokl. na
             4-y Mezhvuz. Konferentsii po primeneniyu fiz. i matem.
             modelirovaniya v razlichn. otraslyakh tekhn. Sb. 2.
             M., 1962, 25-38)

TEXT: It is pointed out that the use of d.c. and a.c. simulators
in conjunction with continuous analogs results in quicker calcu-
lations and increases the number of problems which are solved. It
is shown that, in the calculation of s.c. currents due to several
simultaneous faults or s.c. currents in systems with disconnected
phase, the components of continuous analogs may be used for elec-
trical simulation of 'ideal' transformers or for automatic setting
of operating conditions which satisfy the limiting conditions at

Card 1/2

Application of continuous ...

S/194/62/000/012/013/101
D201/D308

the damaged point. The possibility of using these components for
the reproduction of nonlinear static load characteristics is in-
vestigated. It is also shown that it is possible to take into ac-
count the real transformation coefficient when working with static
a.c. simulator and to take into account the mutual inductance be-
tween the lines in null-to-sequence circuits, when the simulators
are coupled with analogs. 2 references. /¯Abstracter's note: Com-
plete translation._7

Card 2/2

SOKOLOV, N.I., doktor tekhn.nauk (Moskva); GUREVICH, Yu.Ye., inzh.
(Moskva);KHVOSHCHINSKAYA, Z.G., inzh. (Moskva)

Use of analog computers in studying the parallel operation of
large turbogenerators. Elektrichestvo no.10:5-13 O '63.
(MIRA 16:11)

SOKOLOV, N.I., kand.tekhn.nauk

Choice of coordinate systems and use of equivalent circuits in
mathematical modeling of the transients of synchronous and asynchronous
machines.   Trudy VNIIE no.15:47-72 '63.   (MIRA 16:12)

SOKOLOV, Nikolay Ivanovich; SOBOLEV, O.K., red.; BUL'DYAYEV, N.A.,
tekhn. red.

[Synthesis of linear automatic control systems with random
action] Sintez lineinykh sistem avtomaticheskogo reguliro-
vaniia pri sluchainykh vozdeistviiakh. Moskva, Izd-vo
"Energiia," 1964. 127 p. (Biblioteka po avtomatike, no.93)
(MIRA 17:3)

SOVALOV, S.A., kand. tekhn. nauk; SOKOLOV, N.I., doktor tekhn. nauk;
SOKOLOV, N.N., inzh.

Carrying capacity of electric power transmission lines from
thermal electric power plants. Elek. sta. 35 no.2:73-79
F '64.   (MIRA 17:6)

1. Ob"yedinennoye dispetcherskoye upravleniye Yedinoy ener-
геticheskoy sistemy SSSR (for Sovalov). 2. Vsesoyuznyy nauchno -
issledovatel'skiy institut elektroenergetiki (for N.I. Sokolov).
3. Energoset'proyekt (for N.N. Sokolov).

GRUZDEV, Igor' Aleksandrovich; KADOMSKAYA, Kira Panteleymonovna;
KUCHUMOV, Leonid Aleksandrovich; LUGINSKIY, Yakov
Natanovich; PORTNOY, Marlen Gdalevich; SOKOLOV, Nikolay
Ivanovich; NIKOLAYEVA, M.I., red.

[Use of analog computers in electric power systems;
methods for studying transient processes] Primenenie
analogovykh vychislitel'nykh mashin v energeticheskikh
sistemakh; metody issledovanii perekhodnykh protsessov.
[By] I.A.Gruzdev i dr. Moskva, Energiia, 1964. 407 p.
                                              (MIRA 18:2)

L 27378-65   EWT(d)/EWP(1)   Pg-4/Pk-4/Pl-4/Po-4/Pq-4/Pae-2   IJP(c)   EC

ACCESSION NR AM4041631   BOOK EXPLOITATION   S/
                                                                             32
                                                                             B+1

Sokolov, Nikolay Ivanovich

Synthesis of linear automatic control systems under random action (Sintez
  lineynykh sistem avtomaticheskogo regulirovaniya pri sluchaynykh
  vozdeystviyakh), Moscow, Izd-vo "Energiya", 1964, 127 p. illus., biblio.
  15,000 copies printed. Series note: Biblioteka po avtomatike, vyp. 93

TOPIC TAGS: linear automatic control system, random stationary signal

PURPOSE AND COVERAGE: The book considers the problem of synthesizing linear
automatic control systems under the influences of random stationary signals and
certain assigned time functions. Two stages of synethesis are assigned: de-
termining the desired transmission function of the system from the condition of
optimal saturation of technical regimes and determining the structure of the
circuit and parameters of technically feasible systems of automatic control with
respect to the transmission function. The book is intended for engineers,
graduate students and advanced students concerned with automatic control.

TABLE OF CONTENTS [abridged]:

Card 1/3

L 27378-65
ACCESSION NR AM4041631

Card 2/3

L 27378-65

ACCESSION NR AM4041631

Bibliography -- 127

SUBMITTED: 21Dec63   SUB CODE: DP, EC

NO REF SOV: 018   OTHER: 005

Card 3/3

I. 30106-65 EWT(d)/EWP(l) Po-4/Pq-4/Pg-4/Pk-4/Pl-4 IJP(c) GS/BC

ACCESSION NR: AT5004118 S/0000/64/000/000/0169/0187

AUTHOR: Sokolov, N. I.

TITLE: Selection of a block diagram and the parameters of a combined control system

SOURCE: Vsesoyuznoye soveshchaniye po teorii invariantnosti i yeye primeneniyu v avtomaticheskikh sistemakh. 2d, Kiev, 1962. Teoriya invariantnosti v sistemakh avtomaticheskogo upravleniya (Theory of invariance in automatic control systems); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 169-187

TOPIC TAGS: invariance theory, cybernetics, automatic control system

ABSTRACT: This article determines a method of selecting a block diagram and the parameters of a combined control system. The author commences by selecting a block diagram of an uncorrected automatic control system (ACS) consisting of functionally necessary elements. He then determines the block diagram of an uncorrected linear ACS consisting of two control channels - a basic and auxiliary. Then the initial normalized transfer functions of an invariant ACS are determined. Three cases are examined; in each case, the useful signal x in (t) acts on the input of the projected ACS, and the disturbing signal f(t) acts on the control object. The

Card 1/2

L 30106-65

ACCESSION NR: AT5004118   0

transfer function is then determined when the correcting device of the basic con-
trol channel of an ACS does not include the inlet point of the perturbing signals;
when the first parallel correcting device does not include the inlet point of the
perturbing signals and the second includes it; and when the first parallel cor-
recting device does not include the inlet point of the perturbing signals and the
second does. The article concludes with a determination of the parameters and
diagram of the correcting devices and amplification factor of the basic control
channel, and with a determination of the diagram and parameters of the auxiliary
channels. Orig. art. has: 3 figures and 45 formulas.

ASSOCIATION: None

SUBMITTED: 24Sep64   ENCL: 00   .   SUB CODE: DP, IE

NO REF SOV: 006   OTHER: 000

Card 2/2

L 27307.-65   EWT(m)/EPA(w)-2/EWA(m)-2   Pab-10/Pt-10   IJP(c)
                                          S/0120/64/000/006/0028/0029
ACCESSION NR: AP5002140

AUTHOR: Antonov, A. V.; Vasil'yev, P. I.; Venikov, N. I.; Kalinin, S. P.;
Sokolov, N. I.; Khaldin, N. N.; Khoroshavin, B. I.; Chumakov, N. I.

TITLE: Changing the IAE cyclotron into a controllable-ion-energy mode of
operation

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1964, 28-29

TOPIC TAGS: cyclotron, IAE cyclotron

ABSTRACT: The adoption of rapid energy control in the 1.5-meter IAE cyclotron,
with preservation of a good ($\pm 0.3 - 0.4\%$) monoenergetic characteristic and short
duration (2—4 nsec) of accelerated-ion clusters, was predicated upon the following
changes introduced into the cyclotron: (1) Correction of magnetic field by the
currents in additional windings within 5—14 koe; (2) Provision of a dee-type slit
ion optical device suitable for the entire range of accelerated ions; (3) Replacing

Card 1/2

L 27307-65
ACCESSION NR: AP5002140

the VCh-200 h-f oscillator by a GU-300 which can be tuned without additional neutralization within 8—13 Mc; (4) Introduction of a remote control of dees position; (5) Correction of optical properties of the system guiding the output beam. As a result of the above measures, the type and energy of particles can be changed in less than an hour's time; particulars are tabulated. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: Institut atomnoy energii (Institute of Atomic Energy)

SUBMITTED: 20Nov63   ENCL: 00   SUB CODE: NP

NO REF SOV: 005   OTHER: 000

Card 2/2

L 2968-66   EWT(d)/EWP(k)/EWP(l)   UR/0105/64/000/009/0091/0091
ACCESSION NR: AP5026355

AUTHOR: Bel'kind, L. D.; Venikov, V. A.; Glazunov, A. A.; Grudinskiy, P. G.;
Zhadin, K. P.; Zhebrovskiy, S. P.; Lapitskiy, V. I.; Neklyudov, B. K.; Pavlenko, V.A.
Razevig, D. V.; Rossiyevskiy, G. I.; Safonov, A. P.; Sokolov, N. I.; Soldatkina, L.A.
Tayts, A. A.; Ul'yanov, S. A.; Fedoseyev, A. M.; Kheyster, V. A.

TITLE: Professor B. A. Teleshev on this 70th birthday and the 45th anniversary
of his engineering, scientific, and teaching activity

SOURCE: Elektrichestvo, no. 9, 1964, 91

TOPIC TAGS: electric engineering personnel

ABSTRACT: Boris Arkad'yevich Teleshev was seventy years old 12 March 1964.
He graduated from the electromechanical department of the Petrograd Poly-
technic Institute in 1917 and gained the title Electrical Engineer in 1920.
In the Union of Electric Power Stations of the Moskovskiy rayon, Teleshev
was one of the founders of the first dispatcher service of the Moscow
Power System, the chief dispatcher of this system, the manager of the high-
voltage networks of the Moscow Union, the chief engineer in construction of
the Moscow high-voltage network and of the high-voltage networks of the

Card 1/3